REVIEWS.

Art. XXVII.—*A Practical Treatise on Materia Medica and Therapeutics.* By Roberts Bartholow, M.A., M.D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, and formerly Prof. of Materia Medica and Therapeutics in the Medical College of Ohio, etc. etc. 1 vol. 8vo. pp. 537. New York: D. Appleton & Co., 1876.

A recent English review of the Memoir of the late Norman Macleod, D.D., commences thus: "This"—the Memoir—"is a really good book, and, even in its present shape, a popular book, which does honour to its subject, and to its author, in their several degrees. It is, however, so good, that we wish it were made better." Similar language may be justly applied to the treatise of Dr. Roberts Bartholow on Materia Medica and Therapeutics, which lies before us. It is so good that it ought to be better, and we wish that it were made better. The merits, which give to it a high place among works of the class to which it belongs, and which justify the wish, if not the demand for greater excellence than it now possesses, will be apparent as we proceed.

Works on Materia Medica and Therapeutics have multiplied so largely within the last few years, that we are compelled to inquire into the reason or necessity for their increase; and to demand of each new book, that treats of this subject, a justification of its appearance. When Rufus Choate was asked by a young lawyer, fresh from the lectures of Story and Greenleaf, if there was any chance for a new-comer among the crowded competitors of the Boston or New York bar, the great advocate replied: there is always room on the front seats. So there is always room for new books on the front seats of our libraries. We welcome to these seats every new-comer that is worthy, and gladly place him on shelves reserved for the elect, or in the niche which holds our favourites, inspirers, and instructors. At the present time an unusually cordial welcome awaits any new book on Materia Medica and Therapeutics, that comes to the profession freighted with recent acquisitions and needed knowledge. If the new claimant only presents us with traditional opinions and traditional superstitions, if he only serves up a re-hash of old views in new covers, yesterday's baked meats on to-day's fresh plates, the more sternly he is rebuked by that neglect of his book which is its severest condemnation, the better. If, on the contrary, he has anything to offer which is not only new, but important, his work will be heartily welcomed, however great and imposing may be the crowd through which it has to make its way. Dr. Bartholow unhesitatingly claims for his book a place among the second of these two classes. He says:—

> "It may well be inquired why I have ventured to add a new book to those already existing in this department of medical knowledge. A belief, which I trust will not be regarded as egotism, that I have earned the right to address the medical profession, has moved me to the preparation of this work. Several years a teacher of Materia Medica and Therapeutics, I have necessarily

formed opinions as to the kind of information which should be contained in a treatise on this subject. As far as such a course of experiment is practicable, I have demonstrated in my lectures the actions of remedies on animals. I have conducted in my private laboratory many independent investigations, and have contributed in this way, I submit with diffidence, some original knowledge to the subject of therapeutics. The information thus acquired has been supplemented by thirty-two years of clinical experience as a practitioner of medicine. Under these circumstances I am induced to believe that my professional brethren and medical students will hold that I am entitled to a hearing."

This is the language of courageous self-confidence. If there are those who can not applaud its delicacy, there are none who will deny its frankness. Dr. Bartholow does not misjudge his position in using it. He is well known as a zealous student of medical science, an acute observer, a good writer, a skilled practitioner, and an ingenious, bold, though sometimes reckless investigator. His present book will receive the cordial welcome which it deserves, and which the honourable position that he has won, entitles him to demand for it.

The last quarter of a century, and particularly the last ten or fifteen years, have witnessed a marked change in the character of the works on materia medica that have appeared during this period, in comparison with those of any previous date. The change is an important and auspicious one, but it is only the commencement of still greater change that is yet to come. The change to which we refer is twofold in character. It concerns, first, the limits or boundaries of the science, which have been latterly greatly enlarged, so as to include many other agencies than drugs; and it concerns, secondly, the method by which the action of remedies on the human system is investigated, and their consequent therapeutic employment.

Until within a recent period, treatises on materia medica and therapeutics have been confined almost exclusively to a description of drugs and of their therapeutic application. They have, moreover, been written almost exclusively from a clinical standpoint, and have made very little account of the physiological action of medicinal agents. Illustrations of the truth of this remark abound in the medical literature of this country and of Europe.

Nearly the whole of Pereira's treatise, a monument of marvellous industry and knowledge, is devoted to drugs. The first part of the first volume refers, it is true, to light, air, climate, exercise, diet, mental influence, etc., as agencies which modify the course of disease, and consequently have some therapeutic power; but the account of these important agents is so brief and meagre, that the impression which the student derives from the perusal of Pereira's great work is that drugs are the most important part of the *armamenta medicorum*, and that all other remedies are comparatively insignificant. A similar impression is produced by the study of the Materia Medica of Trousseau and Pidoux. Yet the *Clinique Médicale* testifies, from beginning to end, that Trousseau constantly and successfully employed many other agents than drugs in the treatment of disease. In like manner, Oesterlen's work presents us with a discussion of the action and use of drugs alone, and thus indicates that the German school of medicine, like that of England and of France, was not at the time he wrote emancipated from the notion that the physician's materia medica was confined to what the pharmacist prepares, and the druggist dispenses. Stillé's admirable treatise resembles, in this respect, the works that we have mentioned of his transatlantic colleagues, and proclaims that American medicine attaches more importance to drugs than to other agencies.

We do not wish to depreciate the value of drugs as remedial agents. They hold an important place in therapeutics from which they can never be dislodged. They are not, however, the sole, not even the chief reliance of the physician. They are auxiliaries to other and more potent forces, whose subtle influences, unperceived and unrecognized by the unintelligent and the vulgar, are often decisive of the issues of life and death. Every physician acknowledges the power of these agents, and, as far as it is possible for him to do so, utilizes them for the benefit of his patients in the hospital and in the sick room. Remedies which possess such an influence, and which the wisest physicians employ to as great an extent as possible, not only ought not to be excluded from works on materia medica, but should receive an ample discussion in them. It is not difficult to point out these extra-pharmaceutical remedies, nor to discern their character. The experience of every practitioner makes him familiar with them. Possibly there are physicians who use them unconsciously. They may be distributed into three classes. The first class comprises mental influences, that is the action of the mind upon the body; or, in more precise language, the influence of the cerebral ganglia upon the other ganglia of the nervous system, and through the latter upon the functions and organs, by which physiological and pathological processes are more or less modified. All forms of mental influence belong to this class. They are subjective remedies, and may be appropriately designated as subjecta. The numerous works upon the mutual action of mind and body, which have appeared of late years, especially those of Brodie, Feuchsterleben, Maudsley, Bain, Tuke, and others, testify to the physiological and therapeutical power of this class, but most writers on materia medica either do not mention it at all, or content themselves with the briefest possible allusion to it. To the second class belong all the circumstances or conditions which surround a patient, and to a greater or less extent affect him as causes of disease, or means of relief. These are known as circumscripta, or the patient's surroundings. They are the character, exposure, ventilation, and drainage of the chamber and of the house or hospital in which a patient is placed, and the occupation, clothing, exercise, habits, climate, and other like circumstances that beset him. These are usually called hygienic influences, and are discussed at length by writers on hygiene. They cannot, however, be disconnected from practical therapeutics. They are often the most potent agents, not only in the causation and prevention of disease, but in the treatment of it. The efficacy of change of air in the management of pertussis and cholera infantum, of ventilation and bathing in scarlet fever and typhoid fever are familiar illustrations of this truth. The diet of a patient forms the third great class of remedies. This is technically called dietetica. Its physiological importance has always been known. Man must eat, or die. Its therapeutical importance—its direct and intelligent application to the treatment of disease—has only been recognized of late years, and its full importance is not yet fully appreciated. If now to these three classes, all of which eminently belong to the medical material, or materia medica of the practitioner, we add a fourth, drugs, or medicamenta, we have a notion of the whole territory which materia medica properly comprises. Subjecta, circumfusa, dietetica, and medicamenta are the four great departments which form the practitioner's complete outfit. This is the armory from which he draws all his weapons. It is a dwarfed and imperfect materia medica which is limited to the last of these four classes.

Intelligent physicians have always and everywhere, practically, if not theoretically, recognized the therapeutical importance of these four classes of remedies. Unfortunately professors in our medical schools, who have been charged with the duty of teaching materia medica, and writers, who have undertaken to expound it in text-books and learned treatises, have commonly discussed drugs alone. Hence the almost universal impression that physicians are limited, or limit themselves in the treatment of disease to the exhibition of drugs. In answer to the question, what was your treatment, most persons, medical or non-medical, expect only a catalogue of the medicines administered.

Treatment and drugging are too often synonymous. Dr. John Ware successfully resorted to the first class of agents to which we have referred, the subjecta, when he prescribed a dose of volition in a case of hysterical aphonia. Put will enough into your throat, and not drugs, was his prescription, and you will speak. I will try, was his patient's courageous and confident answer; and she, who had not spoken for months, and for whose relief iron, electricity, counter-irritation, and the like had been tried in vain, by an effort that forced the blood to her head and crimsoned her cheeks and ears, sent a volitional stimulus to her glottis, which made her voice roll out like a blast from a trumpet. The paralysis was relieved and did not return. Abernethy, the most eminent and perhaps the roughest English physician of his time, selected a remedy from the second class, the circumfusa, in the case of an American clergyman, who had crossed the Atlantic to consult him, when he cut short the patient's laboured and querulous description of dyspepsia, blue devils, and hard parish work, with the curt advice, "damn your parish, go home and build a barn." The clergyman was scandalized and confounded, but like Naaman the Syrian, who concluded to wash and be clean, the American doctor of divinity swallowed his anger, and went home and built a barn. He was rewarded for his good sense by recovery. Sydenham, who fully appreciated the comprehensive character of a rational materia medica, and frequently employed non-pharmaceutical remedies, illustrated the importance of our third class, dietetica, when he ordered, in place of drugs, a roast chicken and a pint of canary for a patient, whose story is graphically told by John Brown in that delightful book, Horæ Subsecivæ. Felix ille is the natural and just comment of the genial Edinburgh doctor on the patient's good fortune.

Dr. Bartholow's treatise has the merit, and a great merit it is, of including diet as well as drugs. Under the head of agents used to promote constructive metamorphosis, about thirty pages are devoted to a discussion of aliments, of special plans of diet, of alimentation in disease, and of water. This is too brief for so important and comprehensive a subject, but it is excellent as far as it goes It contains a large amount of valuable matter which is apt to be neglected by the profession. As we have already intimated, this section of our author's work is a move in the right direction, and we wish that he had ventured further in the same path. If he had added an account of the physiological and therapeutical action of the mind and of surrounding influences to his account of diet and of drugs, if he had given us, as he is admirably qualified to do, a discussion of the subjecta and circumfusa in his materia medica, as well as the dietetica and medicamenta, he would have presented to the medical world the most complete treatise on the subject, considered from the point of view which we have indicated, that has yet appeared.

This enlargement of the boundaries, or rather of the territory of materia medica, which has rendered the science more comprehensive, and at the same time more rational, constitutes only one part of the twofold change to which we have referred, as characteristic of recent progress in this department of medical inquiry. The other part of the change, the second characteristic, which the recent progress of scientific inquiry has developed, and which differentiates the materia medica of to-day, not only from that of the distant past, but from that of a past quite near to us, is to be found in the method by which the action of medicines on the human system is investigated, and their therapeutic applications inferred.

In the remote and mythical age of medicine, the sick, and especially those who were afflicted with unfamiliar or unknown maladies, were carried on their beds into the streets, with the hope that some passing traveller might recognize their diseases and suggest appropriate remedies. Such was the origin of clinical observation and teaching. From that early time, rife with superstition, error, and empiricism, down to a recent period, clinical observation has been relied upon as the only source for ascertaining the therapeutic action of remedies, and as the sole arbiter of their therapeutic value. In the trial of the remedial action of medicinal agents, and especially of drugs, it has usurped, or been allowed to assume all the functions of counsel, expert, jury, and judge. Not only has this been done, but the remedies employed have more often been selected by whim, superstition, or unfounded theory than by sound deduction or rational empiricism; and their therapeutic value has been more frequently decided, simply by the issue of the cases in which they were used, that is, by the single fact of death or recovery, than by their influence in modifying the natural course of disease. Clinical observers too often reasoned, *post hoc, propter hoc.* Science could not accept such reasoning. In the mean time the other physical sciences, which had become more exact in their methods, more precise in their results, and more confident in their tone, advanced with unexampled rapidity. It was evident that therapeutics must imitate them, and take a new departure, or, renouncing all scientific aspirations, must be content with the position of a nurse, or descend to the role of a conjurer. The choice was soon made, and almost as soon as it was made the effect was seen in grander results and more rapid progress.

The urgent demand or fundamental necessity of scientific therapeutics was for an accurate determination of the physiological action of remedies. This, so far as drugs were concerned, implied two distinct lines of inquiry; first, an investigation into the course or progress of a drug through the system, by which its mysterious and tortuous windings through the secret channels, fluids, and organs of the economy, from ingestion to complete elimination or destruction, should be traced and ascertained, and all its metamorphoses and combinations in the body be determined with as much exactness as in the chemist's laboratory; and second, an investigation into the behaviour of the system as the drug passed along, or a determination of the organic and functional modifications, which accompany every step of the passage of the drug from its entrance into the system to its exit. Clinicians were content with the fact, that when chlorate of potash was administered, stomatitis was relieved more rapidly than when the chlorate was not used; and they accordingly advised the chlorate of potash in cases of aphthæ. The scientific therapeutist was not content with this statement. He insisted upon knowing, first, what became of the chlorate of potash in the stomach; when and how it was absorbed; whether it remained unchanged in the blood, or not; when it left the blood and where it went; by what organs and in what condition it was eliminated; he demanded in short, that every grain taken into the system should be accounted for. He insisted upon knowing, secondly, how the stomach behaved while the chlorate of potash was there; how the blood was affected by its presence; what influence, if any, was exerted by it upon the functions of the system; and how the salivary glands and kidneys, and other organs, engaged in the process of elimination, were affected by the labour which was imposed upon them. Possesssed of this knowledge, the scientific practitioner is in a position to employ the chlorate of potash intelligently, and to determine whether the relief which it affords to stomatitis is, or is not, counter-balanced by physiological damage inflicted elsewhere.

Investigations of this character are among the most abstruse and difficult of any that the physicist is called upon to make. They require for their prosecution the most delicate instruments, the nicest manipulation, and a profound acquaintance, not only with physiology and its cognate branches, but with chemistry, mathematics, and many other departments of knowledge. To all this, the successful student of physiological materia medica must add a long and severe training in the art of original research, and must possess what may be termed the faculty of philosophical imagination, or in other words, a genius for devising new and conclusive experiments. It is as difficult a task, and as lofty an intellectual achievement to trace a particle of strychnia from the stomach through the blood to its oxidization in the ganglia of the nervous system, or to its elimination by the kidneys, and to ascertain *how*, when, and in what proportion nerve tissue is changed, and the functions of the economy modified by its presence, as to sweep the heavens for comets, explore the rings of Saturn by spectrum analysis, or calculate the force that "binds the sweet influence of the Pleiades" and "guides Arcturus with his sons."

Notwithstanding these inherent difficulties, physiologists and clinicians have courageously attempted to solve the problem of the physiological action of medicines, and to obtain results as definite and accurate as those of chemistry or mathematics. We do not assert that such definite and accurate results have yet been attained, but it may be safely affirmed, that the researches of Bidder and Schmidt, Kölliker, Bernard, Schiff, Helmholz, Anstie, Binz, M. Sée, H. C. Wood, Jr., our author, and others have made an auspicious commencement, and one which promises results of incalculable importance to the future of medicine. What has been accomplished is reflected by recent works on materia medica, and has already wrought a notable change in the treatment of disease. Waring's treatise was one of the first in the English language to recognize the importance of the new departure, and to utilize the knowledge of the physiological action of drugs, that had been acquired at the time of its appearance, for the benefit of a sound therapeutics. Nothnagel has gone further than Waring in the same direction. The acceptance with which the Therapeutics of Sydney Ringer was received at the time of its publication, and the popularity which it still enjoys in England and this country, in spite of its obvious imperfections, may be fairly attributed to the fact that its therapeutics is professedly based upon the explanation which it gives of the physiological action of the remedies it describes. The recent admirable work of Dr. H. C. Wood, Jr., teaches and, we may justly add, demonstrates the importance of supplementing the clinical observation of the therapeutic application of drugs by an investigation into their physiological action. Dr. Bartholow's *Materia Medica* is another illustration of the same thing. His work does not ignore or depreciate the value of the empirical facts of a well-grounded and rational professional experience, but, as far as possible, it bases the therapeutical action of remedies upon their physiological behaviour. It would be an easy and grateful task to quote largely from our author in confirmation of this statement, but it is far better to refer the reader to the book itself. We cannot refuse, however, to call attention to the articles on alcohol, digitalis, belladonna, opium, and aliments as excellent examples of a clear and condensed presentation of recent acquisitions with regard to these agents, and of the relation of their physiological power to their therapeutical employment.

At the present time, when the discussion of the physiological action of alcohol, its position as a food or poison, as an unmitigated curse to humanity, devised by the devil, or as a blessing to the race, sent of God, is carried on by both parties, teetotallers and pro-alcoholites alike, with the utmost partisan acerbity, each advocating its own side, by partial statements, half truths and special pleading, it is refreshing for those who believe in the truth, the whole truth, and nothing but the truth, as the most efficient agent of reform, to meet with an impartial summary of the case, as far as known to science at present, and a judicial opinion upon it like the following:—

"The disposition of alcohol in the organism is a subject which has gone through several revolutions of opinion. At present the weight of authority and the deductions of experiment are in favour of that view, which maintains that, within certain limits (one ounce to one and a half ounces of absolute alcohol to a healthy man), alcohol is oxidized and destroyed in the organism, and yields up force which is applied as nervous, muscular, and gland force. The amount of alcohol ingested in excess of this oxidizing power of the organism, is eliminated as alcohol by the various channels of excretion—by the lungs, skin, kidneys, etc. As alcohol checks tissue metamorphosis, and thus diminishes the evolution of heat and force, it might be expected that the products of its own oxidation would supply the deficiency; but this is not the case. Alcohol is a useful food in the small quantity which increases, but does not impair, digestion, which quickens the circulation and gland secretion, but does not over stimulate, and which is within the limit of the power of the organism to dispose of by the oxidation processes. This amount has been pretty accurately shown, as stated above, to be one ounce to one ounce and a half of absolute alcohol for a healthy adult in twenty-four hours. All excess is injurious. North pole voyages, military expeditions (experiences in India and the Ashantee march), and the diminished power of resistance to cold shown by drunkards, have conclusively demonstrated that alcohol does not supply the place of other foods; and that those habituated to its use, damaged as they are in their vital organs, do not possess the same endurance of fatigue, and the same power of resistance to external morbific influences as do the healthy. Furthermore, clinical experience has amply proved that topers do not bear chloroform well, that they succumb more quickly to injuries and surgical operations, and that they possess much less power of resistance than the temperate to the inroads of acute diseases. While these facts rest upon the soundest basis, it is equally true that alcohol is, within certain limits, a food; and that the organism may subsist for a variable period on it exclusively." (pp. 308–9.)

We had occasion at the beginning of this notice to remark that Dr. Bartholow's work was so good that it ought to be better, and we justified the criticism, by showing that while he has interpreted the science of materia medica more liberally than to make it only a descriptive catalogue of the articles on the druggist's shelves, he might have legitimately gone further than he has done in this new direction, and have added a discussion of mental and hygienic remedies to his account of aliments and drugs. We now repeat the remark in connection with his presentation of the physiological action and therapeutical application of medicines. He has discussed this part of his subject so well as to make us wish it had been possible for him to do it better still. The two distinct lines of investigation, which lead up to a knowledge of the physiological action of medicines, have previously been referred to, and the two distinct classes of facts which are thereby revealed, one belonging to the progress of drugs through the body and their metamorphoses, and the other, to the reaction of the economy upon the drugs as they pass along, have been indicated. That an accurate notion of how and when a drug passes into and passes out of the body, and of the phenomena accompanying its mysterious march, is necessary to a scientific therapeutics, is implied all through Dr. Bartholow's treatise, but the subject is not presented so clearly and prominently as to compel the attention of the reader. So far as it is possible to do so, each drug should be described in this way, and the practical therapeutical corollaries, which flow from such knowledge, should be appended and enforced. It is important, for example, that the practitioner should know, with regard to any given dose of bromide of potash which he prescribes, how long it remains in the stomach after ingestion, and in what form it leaves that organ, how the stomach is affected by its entrance into the gastric territory, its residence there, its departure therefrom, and the inferences to which these facts lead. In like manner, with regard to the blood, the brain, the nervous system, the heart, the capillaries, the kidneys, and all the functions and organs of the system, he desires the most precise information, that science can impart, as to how and when the dose he prescribes will affect them. Let us not be misunderstood. We do not assert that in the present condition of physiological science, it is possible for any one to render a complete account of all the particulars we have mentioned; but it is clear that as many of them should be given as possible, and they should be presented in separate paragraphs, and under distinct headings, so as to emphasize their importance.

There is another subject, and an important one, to which our standard works on materia medica give too little attention. It is the potency of different doses, or the physiological effect of variation in dose. The French call this *dosage*, a term for which, unfortunately, there is no single equivalent in the English language. Dosing conveys the idea of improper or excessive medication, while dosage means not merely the adaptation of the dose to the age, idiosyncrasy and pathological condition of the patient, but to the particular physiological result which the prescriber wishes to bring about. It is probable that practitioners recognize the fact that the number of minims or grains, which the *United States Dispensatory*, or any other work on materia medica, gives as the dose of a drug, by no means represents its physiological power. A small dose given frequently, that is, repeated at short intervals, of almost any drug, will affect the economy differently from a single legitimate dose. Doses, administered in such a way that each repeated dose enters the blood before the previous one is eliminated, produce a continued physiological action, which cannot be obtained by the exhibition of a single dose, or of the frequent dose, or of a toxic dose. The practical importance of all this is obvious. But although such is obviously the case, no work on materia medica should leave it unexplained. It should be enforced as a part of the description of the physiological action of every drug. We might quote many passages from Dr. Bartholow's book to show that he is fully aware of the therapeutical value of dosage, but he has generally restricted himself to the old orthodox fashion of giving under the head of "dose" the average quantity that is proper for administration.

We have extended these remarks so far as to leave very little space for any detailed account of the treatise on which we have commented. Fortunately only a few words are necessary for this purpose.

The work, comprised within the limits of a single volume of five hundred and thirty-seven pages, is divided into three parts. The first part, consisting of sixteen pages, describes briefly the modes in which medicines are introduced into the organism. The second part, which forms the bulk of the work, is devoted to a discussion of the actions and uses of remedial agents. The third part gives an account of topical remedies. No scientific classification of the materia medica is possible in the present state of science. Writers are therefore justified in adopting any classification that happens to suit their fancy, or in adopting none at all. In fact there are about as many different classifications as there are different writers upon this subject. Our author has devised a new one, which has at least the merit of simplicity, though it is of very little practical value. He divides remedial agents, excluding topical remedies, into four classes: 1. Those used to promote constructive metamorphoses. 2. Those used to promote destructive metamorphoses. 3. Those used to modify the functions of the nervous system. 4. Those used to cause some evacuation from the body. Under the first head, or constructive agents, are placed aliments, iron, quinia, vegetable bitters, water, pepsine, oils, fats, acids, and the like. Under the second head, or destructive agents, are placed alkalies, iodine, mercury, antimony, colchicum, and their congeners. Agents which modify the functions of the nervous system are divided into those which excite the functional activity of the general nervous system, like electricity and nux vomica; those which excite the activity of the cerebrum, like camphor and valerian; those which diminish or suspend the functions of the brain after antecedent excitement, like alcohol, ether, and opium; and those which depress the motor functions of the spinal cord and sympathetic, like conium, aconite, and veratrum viride. Evacuants are divided, in accordance with their prominent physiological actions, into emetics, cathartics, urino-genital remedies, and so on. Under topical remedies are placed antiseptics, counter irritants of all sorts, and emollients. In describing each article, a definite and systematic order is followed, which contributes not less to the clearness than to the conciseness of the description. There is first the technical name of the article to be described, with a brief and comprehensive definition of it, and its average dose. This is followed by a list of preparations into which the article enters, and their doses. Its antagonists and incompatibles are mentioned next, and these are followed by a brief account of the agents that aid its remedial actions, or its synergists. Its physiological action is then described, to which are appended its various therapeutical applications. A list of the authorities referred to, concludes the account of each separate article.

We are glad to notice that a large number of medicines whose virtues, to say the least, are of doubtful importance, but to which the superstitions and whims of the past attributed a fictitious value, are not to be found in Dr. Bartholow's list of remedies. Another class of agents, whose power to affect the economy is undoubted, but which, as the profession have learned by sad experience, are more likely to do harm than good, like antimony and colchicum, are described with commendable brevity. Still another class of agents, like aconite and belladonna, with whose names the profession have been familiar for ages, but of whose virtues it has taken little note, are brought into prominent notice, and described as they should be at considerable length. Ample space, moreover, is given to those few agents which have been, and always will be chief among drugs—opium, iron, bark, alcohol, and two or three others.

Classical authorities tell us that Æsculapius, the mythical father of medicine, who brought down from gods to men a knowledge of the healing art, flourished about three thousand years ago. If the account current between drugs and humanity from that nebulous age till now were closed to-day, and the former credited with all the lives they have saved, all the pain they have alleviated, and all the good they have done, and charged with all the deaths they have caused, the distress they have produced, and the harm they have wrought, we fear that humanity, on looking at the result, would cry out, away with all doctors' stuff; sink it, as Dr. Oliver Wendell Holmes proposed, to the bottom of the sea. While we rejoice that the prescribing of drugs is only a small part of a physician's duty, we also rejoice that the account to which we have referred is not yet closed. When another three thousand years have passed, the summing of it up will show a different result. Humanity will then accept drugs and gladly give them place as assistants, not disturbers of nature's healing laws. The book which has here been reviewed, and whose last leaves we now turn over, is an auspicious harbinger of that better day in the future, whose dawning we can see, but whose full effulgence a distant posterity alone will witness. E. H. C.

ART. XXVIII.—*A Treatise on the Science and Practice of Midwifery.* By W. S. PLAYFAIR, M.D., F.R.C.P., Professor of Obstetric Medicine in King's College; Physician for the Diseases of Women and Children to King's College Hospital; Examiner in Midwifery to the University of London, etc. etc. With two plates, and one hundred and sixty-six illustrations on wood. 8vo. pp. 576. Philadelphia: Henry C. Lea, 1876.

WERE Siebold, the historian of obstetrics, continuing his great work in these times, he would find himself kept busy chronicling the numerous text-books and new editions which now follow each other in rapid succession; he would doubtless pause to inquire whether, in view of the great excellence of some of the later ones, there was really need for any more. This question was evidently in the mind of the author of the work we now undertake to examine, for although not stating it, yet in his preface he virtually answers it. He finds justification for the publication of his work in the rapid progress made of late in this branch of medical science, in